

Applicants' disclosure. Pursuant to the Examiner's request, Applicants submit herewith a copy of the Andrew Hunter article.

In addition, Applicants submit herewith, in three separate Information Disclosure Statements, information uncovered or made of record in assignee's, Mannington Mills of Delaware, Inc. ("Mannington"), on-going litigations. For the Examiner's convenience, and in an effort to facilitate examination of the attached documents, these IDS's are separated into (1) pleadings filed in Mannington's litigation with Armstrong World Industries, Inc., (2) pleadings filed in Mannington's litigation with Domco Tarkett, Inc., and (3) non-pleading type documents uncovered as a result of these litigations.

In view of the large number of documents submitted herewith, the Examiner is invited to contact the undersigned if he would like to discuss these documents in a personal or telephonic interview.

### **III. Rejection Under 35 U.S.C. §103**

A. The Examiner rejected claims 25, 26, 33-46, 51 and 52 under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 4,214,028 to Shortway et al. ("Shortway"). The Examiner asserts that Shortway discloses the basic method of making a surface covering having multiple layers, including (1) chemically embossing a first layer, and (2) mechanically embossing at least a portion of a second layer, which is a wear layer. The Examiner admits that Shortway does not teach the relative

embossing depths associated with the chemically embossed portion and the mechanically embossed portion. The Examiner asserts, however, that "such relative embossment depths would have been obvious to one of ordinary skill in the art in order to form a surface covering having a cross section like that illustrated in Shortway et al. in Fig. 11." Office Action at page 2. The Examiner also asserts that Shortway teaches other aspects of the claimed invention, including curing the uniform viscosity wear layer (as in claim 51), applying the wear layer before chemical embossing (as in claim 33) and the first layer being a foam layer. *Id.* at pages 2-3. For at least the following reasons, Applicants disagree with and traverse this rejection.

As the Examiner admits, Shortway "does not appear to explicitly teach that the chemically embossed portion of the first layer has a depth greater than any portion of the second layer." Office Action at page 2. Applicants disagree with the Examiner's assertion that "forming embossed layers having such relative embossment depths would have been obvious to . . . to form a surface covering having a cross section like that illustrated in Shortway et al. in Figure 11," because Shortway is directed to a technique that is fundamentally different than the claimed method. These differences in Shortway's technique are described with respect to the embossing steps, but there are a number of process differences related to other portions of the disclosed process that are not discussed.

FINNEGAN  
HENDERSON  
FARABOW  
GARRETT &  
DUNNER LLP

1300 I Street, NW  
Washington, DC 20005  
202.408.4000  
Fax 202.408.4400  
www.finnegan.com

In the first step described in Shortway, for example, the *entire surface* of the wear layer is mechanically embossed. Thus, “[a]t the conclusion of the mechanical embossing procedure, the *entire surface* of the wear layer is embossed so as to give it temporarily the desired flat, dead or dull mat finish or texture all over.” Col. 18, lines 62-65. In contrast, the claimed invention is directed not to mechanically embossing the whole wear layer, but to a portion of the wear layer. A lay person would understand that “a portion” of the wear layer is defined as something less than the whole wear layer.

In addition, Shortway teaches that during this mechanical embossing step, sufficient temperature and pressure are applied to achieve cross-linking between the reactive polymerizable monomers distributed throughout the wear layer and the free-radical polymerization catalyst concentrated in predetermined portions of the design layer beneath. Following the mechanical embossing step, the entire product is heated to a sufficient temperature to (1) foam the foamable layer and (2) melt the areas of the wear layer that were not cross-linked during mechanical embossing. See col. 20, lines 25-54. It is the selective melting step that creates thermally embossed “portions” in the wear layer. In other words, the *melting* step is what converts the uniformly embossed wear layer into discrete embossed *portions*. Therefore, the mechanical embossing procedure described in Shortway is more accurately described as chemically assisted

mechanically texturing. In addition, it is clear that the chemical embossing step occurs after the chemically assisted mechanically texturing step.

As explained above, Shortway does not teach a wear layer that is “mechanically embossed to form a mechanically embossed portion.” Rather it teaches a wear layer that is mechanically embossed *and then selectively melted* to form what the Examiner terms “mechanically embossed portions.” Shortway teaches that, unlike embodiments of the claimed invention, the mechanical embossing step is performed prior to the chemical embossing step. This difference, which is recognized by the Examiner as evidenced by the exclusion of claims 48-52 from this rejection,<sup>1</sup> leads to the use of fundamentally different materials. For example, Shortway teaches that as a result of using pressures and temperatures sufficient to polymerize or cross-link reactive polymers in the printing layer during the initial mechanical embossing step, certain portions in the wear layer possess an “increased melt viscosity,” resulting in a surface which is harder and “which is capable of resisting any softening or melting tendencies during the subsequent heating involved in the blowing or foaming procedure.” Col. 19, lines 41-49. In other words, the materials used in Shortway are such that they result in an appropriate surface texture, without being affected by a subsequent chemical embossing step. *Id.* at lines 46-49 (teaching that the wear layer in Shortway is,

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<sup>1</sup> Claim 48 recites, in relevant part:

A method of making a surface covering having multiple layers including a wear layer comprising:  
chemically embossing at least a portion of a first layer,  
*subsequently* mechanically embossing at least a portion of a second layer.

“capable of retaining their flat, dead or dull mat embossed surface finishes or textures through the higher heating during the blowing and foaming operations.”) *Id.*

The claimed invention as recited in newly added claims 53 and 54, is directed to a mechanical embossing step that is performed on a previously cured wear layer. In fact, the wear layer of the present invention is cured during the chemical embossing steps, not in the mechanical embossing step of Shortway. In view of the many differences described above, it is unreasonable to extrapolate from the clearly different teachings of Shortway, which is a fundamentally different method of making a surface covering, that which Applicants have discovered.

Figure 11, which is relied on by the Examiner to support his assertion that the claimed embossing ratios would have been obvious to one skilled in the art in no way comports to the clear and particular teachings required by the Federal Circuit to support a rejection under section 103, especially considering that the method described in Shortway is clearly different than the claimed method. *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ 2d 1614, 1617 (Fed. Cir. 1999).

The Examiner’s conclusory statements that “forming embossed layers having such relative embossment depths would have been obvious to one skilled in the art in order to form a surface covering having a cross section like that illustrated in Shortway et al. in Figure 11,” is not based upon the objective evidence of record. In other words, Applicants are claiming a method of making a surface covering, which is not only a

clearly different method from that described in Shortway, but which results in a different product. Chemical or mechanical embossing are known process steps used separately. Even if known in combination, the order of those steps, and the materials response to those steps are of technical and patentable significance. One must significantly modify the steps taught by Shortway to arrive at Applicants claimed invention.

Applicants thus submit that the Examiner has not provided the requisite motivation to make the allegedly obvious modification to Shortway, since it is known that "[o]bviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination." *In re Geiger*, 815 F.2d 686, 688 (Fed. Cir. 1987)(citing *ACS Hosp. Sys., v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984)). There is no teaching, suggestion or incentive to modify Shortway in the manner suggested by the Examiner.

Recently, the Federal Circuit further supported this position in finding that the Patent Office must not only "assure that the requisite findings [of motivation] are made, based on the evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion." *In re Lee*, slip op. at 8 (Fed. Cir., January 18, 2002). In the present case, the Examiner is relying on conclusory statements when dealing with particular combinations of prior art and specific claims,

without properly setting forth the rationale on which he relies to support the assertion obviousness. The *Lee* decision holds that such an analysis “does not comport with either the legal requirements for determination of obviousness or with the requirement of the APA (Administrative Procedure Act) that the agency tribunal set forth the findings and explanations needed for “reasoned decision making.” Slip op. at 12-13. For at least these reasons, the rejection over the Shortway is improper and should be withdrawn.

Accordingly, Applicants submit that the *prima facie* case of obviousness is improper and respectfully request that the '103 rejection over Shortway be withdrawn.

B. The Examiner rejected claims 48-50 under 35 U.S.C. §103 as being unpatentable over Shortway, as applied to claims 25, 26, 33-46, 51 and 52 above, and further in view of U.S. Patent No. 4,100,318 to McCann et al. (“McCann”). In addition to the above-described deficiencies in Shortway, the Examiner further admits that Shortway does not teach conducting mechanical embossing subsequent to chemical embossing. According to the Examiner, however, McCann teaches “conducting mechanical embossment subsequent to chemical embossing.” Office Action at page 3. The Examiner concludes that “it would have been obvious to . . . incorporate this aspect into the method of Shortway et al. since either embossing order has been shown to produce satisfactory surface coverings.” *Id.* Applicants respectfully disagree and traverse this rejection.

Any modification of Shortway in the manner suggested by the Examiner to achieve the claimed method, would not only result in the destruction of the intended operation described in Shortway, but would form an improper rejection under section 103. It is well-established that it is improper to combine references if their combination would result in the destruction of the intended operation or if a reference teaches away from the claimed invention. See, *In re Laskowski*, 10 USPQ 2d 1397 (Fed. Cir. 1989). In the present case, Shortway is clearly directed to a different method, which involves first mechanically embossing the entire, uncured wear layer. The reversal of the order of the steps described in Shortway would result in the destruction of the intended operation of Shortway. The initial mechanical embossing step, which both cures the wear layer and polymerizes or cross-links the reactive polymerizable monomers in the print layer, leads to the use of components which will not be affected by a (subsequent) chemical embossing step. Because the material is initially unaffected by chemical embossing, and requires mechanical embossing to facilitate the subsequent chemical embossing step, the steps cannot be reversed. The Examiner's statement that it would have been obvious to first chemically emboss and then mechanically embossing the method of Shortway, i.e., "either embossing order has been shown to produce satisfactory surface coverings," is fundamentally inconsistent with the teachings of Shortway, which is directed to a process that uses materials tailored for an initial mechanical embossing step, not an initial chemical embossing step.



McCann does nothing to remedy this deficiency, since, contrary to the Examiner's assertion, it does not teach a combination of chemical and mechanical embossing. Rather, McCann expressly teaches that "[c]hemical embossing techniques are **alternatives** to mechanical embossing." Col. 5, lines 14-15 (emphasis added). The specific citation relied on by the Examiner teaches either using a chemically etching step or mechanically embossing step to provide a surface texture to a cellular foam. Again, these steps are taught in the alternative, not together. See, col. 4, lines 8-15 (teaching, "After the vinyl overlay 22 is applied, the web is passed through the fusion and expansion oven 35 and **if chemically etched**, will upon exiting the oven, the cellular foam 17 has the desired textured surface. **However, if optional mechanical embossing is employed** upon exiting the expansion oven, the cellular foam 17 is passed through a mechanical embosser 40.")(emphasis added). Thus, McCann does not teach the combination of chemical and mechanical embossing, and certainly does not teach the combination according to the claimed invention.

Assuming, *arguendo*, that the Examiner's assertion of the teachings of McCann are accurate (they are not for the above stated reasons), this reference still would not render obvious the claimed invention. The Examiner's statements drastically oversimplify the complexities associated with the claimed invention. One of ordinary skill in the art would realize that the embossing steps are not simple, interchangeable steps. As specified in Shortway and McCann, for example, there are many aspects that result

in the successful method of making a surface covering. Such aspects can be chemical, mechanical and physical in nature.

For example, chemical variables in such a process include the retarders, inhibitors, and foaming agents that can be used. Mechanical variables include the type of embossing roll, such as whether the roll is heated, and whether it is a contact roller. These factors, depend on, *inter alia*, on whether chemical embossing has occurred or not. Physical variables of the process include factors such as the physical state of the material before and after each embossing step. The Examiner addresses none of these and the many other factors that go into making the drastic modification he proposes. Rather, the Examiner relies on conclusory statements to support his assertion of obviousness.

With the Applicants' specification as a guide, the Examiner has plucked individual teachings from different sections of the references to assemble the claimed invention. The content of the references does not support the combination that has been assembled and thus it is the essence of improper hindsight reconstruction. The *Lee* decision discussed above further holds that "[l]t is improper, in determining whether a person of ordinary skill would have been led to [a] combination of references, simply to use that which the inventor taught against its teacher." *In re Lee*, slip op. at 8 (Fed. Cir., January 18, 2002). For at least these reasons, Applicants submit that the


Examiner has not established a *prima facie* case of obviousness, and respectfully request that this rejection under section 103 be withdrawn.

**IV. Conclusion**

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration of the application and timely allowance of the pending claims. Please grant any necessary extensions of time required to enter this response and charge any additional required fees to our deposit account no. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.

By:  #26,325 per  
Louis M. Troilo  
Reg. No. 45,284

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FINNEGAN  
HENDERSON  
FARABOW  
GARRETT &  
DUNNER LLP

1300 I Street, NW  
Washington, DC 20005  
202.408.4000  
Fax 202.408.4400  
www.finnegan.com